

Atty. Docket No. 004070 USA/PDC/WF/OR
PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No. 09/855,253

REMARKS

Claims 1-19 are all the claims pending in the application. Claims 1, 12-16, and 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Maeda et. al, USP 5,572,323 ("Maeda"). Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeda. Claims 2-10, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Further, the Examiner states the title of the invention is not descriptive and requires a new title.

Applicant gratefully acknowledges the entry of corrected drawings, and the Examiner's interview of June 24, 2003 in which the §102(b) rejections and the title objection were discussed.

Title

The title has been changed to "DYNAMIC AUTOMATIC FOCUSING METHOD AND APPARATUS USING INTERFERENCE PATTERNS." The invention is directed to providing a method and apparatus for automatically focusing a light beam on an article being processed, and maintaining the focus while the article is being processed. Applicant believes the revised title is descriptive of the invention and respectfully request reconsideration and withdrawal of the objection.

35 U.S.C. § 102(b) Rejections

The Examiner has rejected claims 1, 12-16, and 18 as being anticipated by Maeda. Applicant respectfully traverses the rejection.

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The Examiner stated in the previous and current Office Actions that Maeda teaches at least two interference patterns, citing Maeda Fig. 12, and asserting that "an interference pattern divided in half produces two interference patterns." *See*, OAS May 7, 2003, p. 5, ¶ 8. Applicant respectfully disagrees.

Maeda Fig. 12 shows but a single interference pattern resulting from interaction of the P and Q waves. An interference pattern is formed when two waves interact, and here the P and Q waves interact to produce the single interference pattern of Fig. 12. To form two interference patterns, at least three waves must interact wherein one of the waves interacts with each of the other two. This reflects one embodiment described in the Application. "According to one embodiment of the invention, there are provided two side slits located at opposite sides of the central slit. In this case, two interference patterns are created." *See* App., p. 4, line 21. Rather than showing three waves, Maeda Fig. 12 shows only two waves that may interact. Therefore the interaction in Maeda will produce only one interference pattern.

With respect to independent claims 1 (apparatus), 15 (system), 16 (method), and 18 (method), each of the claims require "at least two interference patterns ... wherein at least one pattern is created by interference between [light of a] first periphery region ... [and light of a] paraxial region ... and wherein at least one other interference pattern is created by interference between [light of a] second periphery region ... [and light of the] paraxial region." Maeda teaches only a single interference pattern formed by the P-wave and the Q-wave. Even if this interference pattern were divided, which Maeda does not teach, only copies of the one interference pattern would exist. By contrast, the invention as recited in the independent claims

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requires at least two interference patterns (not copies of a single interference pattern) and light from at least three sources (a paraxial region, a first periphery region, and a second periphery region). For at least this reason, Maeda does not teach or suggested every element of the claimed invention, and therefore Maeda cannot anticipate the claimed invention. Independent claims 1, 15, 16, and 18 are patentable as are all claims dependent therefrom, and Applicant respectfully requests reconsideration and allowance.

CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Amendment Under 37 C.F.R. § 1.116 is being facsimile transmitted to the U.S. Patent and Trademark Office this 7th day of July, 2003.


Thea R. Wagner